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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,650	02/27/2002	Eric Yijing Zhang	Q66048	9665

7590 02/01/2005  
Sughrue Mion Zinn Macpeak & Seas  
2100 Pennsylvania Avenue N W  
Washington, DC 20037-3213

EXAMINER

ALVO, MARC S

ART UNIT PAPER NUMBER

1731

DATE MAILED: 02/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

15

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/914,650	ZHANG ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Steve Alvo	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 November 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The amendment filed November 19, 2004 has clarified the claims and the 35 U.S.C. 112, second paragraph, has been dropped.

Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over ADMITTED PRIOR ART (Jepson claim) in view of MADISON et al and GRIMSLEY et al and WEST.

The ADMITTED PRIOR ART is an implied admission that the subject matter of the preamble is the prior art work of another, see MPEP 2129 III. MADISON et al teaches the bleaching of mechanical pulp in a process similar to the ADMITTED PRIOR ART, wherein the bleaching agent, e.g. hydrosulfites, is added between the last refiner (secondary refiner) and the screen. It would have been obvious to add the bleaching agent of the ADMITTED PRIOR ART between the last refiner and the screening stage as taught by MADISON et al. GRIMSLEY et al teaches when bleaching with hydrosulfites that the access to oxygen should be minimized. It would have been obvious to the artisan when using the reductive bleaching agent of MADISON et al to minimize the access of oxygen as taught by GRIMSLEY et al. It would have been obvious to bleach the pulp under drastic conditions, e.g. a temperature of 150-212 °F (65 to 100 °C as such is taught by WEST; see WEST for adding a chelating agent just prior to the reducing agent. The use of a chelating agent with hydrosulfite bleaching agent would have been obvious from the teachings of WEST to stabilize the hydrosulfite, WEST, column 6, lines 25-28. When more than one refiner is used it would have been especially obvious to use a steam

separator after each refiner as WEST teaches venting each of the sump tanks (20 and 28) to the atmosphere to remove the water vapor and air from the pulp (column 3, lines 35-53) to prevent the oxygen from destroying the effectiveness of the reductive bleaching agent (lines 50-53).

The argument that MADISON et al starts with logs which are ground rather than refined is not convincing. The instant process calls for passing a lignocellulosic material through a chemical treatment system and then through two refiners. MADISON et al passes lignocellulosic material (coarse pulp) to a chemical treatment (NaOH in the "PULP MIXER" and "RETENTION STORAGE") and then through two refiners ("PRIMARY REFINER" and "SECONDARY REFINER") which convert the material to a pulp suspension and after the second refiner adds dithionite (sodium hydrosulfite) to the twice refined pulp (MADISON et al, column 2, lines 24-26). This is substantially the same process claimed.

The argument that instant process uses chips is not convincing as the claims call for "lignocellulosic material, preferably chips". The claims are not limited to "chips". Applicant further argues that the only "fiber-free layer technique in the method of the present invention is refining" is not convincing as the claims are open and do not exclude any of the additional steps used by MADISON et al, besides the steps of the basic process are taught by the "ADMITTED PRIOR ART". The instant lignocellulosic material, like the lignocellulosic material of MADISON et al, would have to be mechanically ground or refined to produce the instant "chips" from the source of wood, e.g. usually trees.

Although MADISON et al does not mention that the sodium hydrosulfite (dithionite) is a reductive bleaching agent, it is the exact same bleaching agent used by Applicant. Clearly it would have the same properties. Applicant further tries to distinguish the instant screening stage

from that of MADISON et al. However, as set forth in the rejection above MADISON et al adds the hydrosulfite bleaching agent between the last refiner and the screen. It would have been obvious to add the bleaching agent of the ADMITTED PRIOR ART between the last refiner and the screen in the manner taught by MADISON et al.

The argument that the “drastic conditions” (65 to 100 °C) , of WEST are not necessarily the same as the instant conditions is not convincing as they overlap the claimed conditions “80 to 90 °C”. No unexpected results have been shown for the claimed “80 to 90 °C”.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

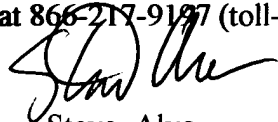
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Alvo whose telephone number is 571-272-1185. The examiner can normally be reached on 5:45 AM - 2:15 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Steve Alvo  
Primary Examiner  
Art Unit 1731

msa